

Work Order ID 163937

Monday, July 10, 2017 12:47:48 PM

163937

Page 1

Item ID: D117-837-111

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: BK117 Basket Mounting Provisions

Start Date: 6/27/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 7/10/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
DSI9724	A								
IIN-D117-837	B								
100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPP D117-837-111 CHG003								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									

DAS
6
9-89

AUG 01 2017

DAS
27
9-89

SEP 11 2017

SEP 07 2017

DAS
28
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																

163937

Page 2

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 6/27/2017 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 7/10/2017 Req'd Qty: 1.00 * 1 *

Customer:

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

[illegible]

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

Picklist Print

Monday, July 10, 2017 12:47:46 PM

Page 1

Work Order ID: 163937

163937

Parent Item: D117-837-111

D117-837-111

Parent Item Name: BK117 Basket Mounting Provisions

Start Date: 6/27/2017

Required Date: 7/10/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 13.03.28 NEW ISSUE DD VERF:JLM IPP
REV:B 13.06.21 IIN-D117-837 REV.A DD VERF:JFS IPP REV:C
14.07.25 ecn 14-571/ chg002 DD VERF:JLM IPP REV:D 15.05.27 add
DSI9727 as per ecn15-571 DD verf:jlmm

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

AN4-13A		Purchased	No			110	Each	279.0000	4	4			
AN4-13A									**			SEP 08 2017	
Bolt													

DAS
27
9-89

Location	Loc Qty	Loc Code
FG	20	M138326
122808	20	
GA	68	
m134634	19	
m135470	49	
ST344	191	
m137544	2	
m137886	189	

D5253-1		Manufactured	No			110	Each	20.0000	4	4			
D5253-1									**			SEP 08 2017	
Shim													

DAS
27
9-89

Location	Loc Qty	Loc Code
ST161	20	
144608	20	

D4893-1		Manufactured	No			110	Each	4.0000	2	2			
D4893-1									**			SEP 08 2017	
Hard Point Adapter, LH													

DAS
27
9-89

Location	Loc Qty	Loc Code
ST536	4	
144615	4	

SEP 08 2017

DAS
28
9-89

DAS
28
9-89

DAS
28
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval				
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval			
Root Cause		FAULT CATEGORY									
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____									
Misidentified ☐	Past Due ☐										

Picklist Print

Monday, July 10, 2017 12:47:46 PM

Page 2

Work Order ID: 163937

163937

Parent Item: D117-837-111

D117-837-111

Parent Item Name: BK117 Basket Mounting Provisions

Start Date: 6/27/2017

Required Date: 7/10/2017

Start Qty: 1.00

Required Qty: 1.00

D4893-2 Manufactured No

110 Each 4.0000 2 2

D4893-2

Hard Point Adapter, RH

**

SEP 07 2017

DAS 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

ST536

4

144618

4

D4894-1 Manufactured No

110 Each 3.0000 1 1

D4894-1

Fwd Beam

**

SEP 07 2017

DAS 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

ST447

3

144931

1

153530

2

D4894-3 Manufactured No

110 Each 2.0000 1 1

D4894-3

Aft Beam

**

SEP 07 2017

DAS 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

ST447

2

144932

2

D4895-045 Manufactured No

110 Each 2.0000 1 1

D4895-045

Fwd Outboard Beam Assembly

**

SEP 07 2017

DAS 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

ST448

1

153522

1

ST478

1

144933

1

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
							OTHER : _____		

Picklist Print

Monday, July 10, 2017 12:47:46 PM

Page 3

Work Order ID: 163937

163937

Parent Item: D117-837-111

D117-837-111

Parent Item Name: BK117 Basket Mounting Provisions

Start Date: 6/27/2017

Required Date: 7/10/2017

Start Qty: 1.00

Required Qty: 1.00

D4895-047

Manufactured No

110

Each

4.0000

1

1

D4895-047

Aft Outboard Beam Assembly

**

SEP 07 2017

DAS
28
9-89

DAS
27
9-89

AN4-17A

Purchased

No

110

Each

233.0000

4

4

AN4-17A

Bolt

**

SEP 07 2017

DAS
28
9-89

DAS
27
9-89

AN5-23A

Purchased

No

110

Each

44.0000

12

12

AN5-23A

Bolt

**

SEP 07 2017

DAS
28
9-89

DAS
27
9-89

MS20002C6

Purchased

No

110

Each

109.0000

12

12

MS20002C6

WASHER

**

SEP 07 2017

DAS
28
9-89

DAS
27
9-89

Location

ST478

Loc Qty

4

Loc Code

146786

4

Location

over003

Loc Qty

150

Loc Code

M137073

100

M137699

50

ST343

83

M137371

83

Location

ST337

Loc Qty

44

Loc Code

M134943

44

Location

ST314

Loc Qty

109

Loc Code

m134754

9

m137073

100

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval _____																		
Description Work Order Deviation				Disposition				BAG 12 88-4																	
								Completed By _____																	
								Lead hand / Supervisor Approval Verification _____																	
								QC / QA Coordinator Approval _____																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																				
OTHER : _____																									

Picklist Print

Monday, July 10, 2017 12:47:47 PM

Page 4

Work Order ID: 163937

Parent Item: D117-837-111

Parent Item Name: BK117 Basket Mounting Provisions

163937

D117-837-111

Start Date: 6/27/2017

Required Date: 7/10/2017
Required Qty: 1.00

Start Qty: 1.00

8

1,666.000

**

M138084

8

Loc Code

Loc Qty

Each

110

No

Purchased

MS21042L4

MS210421 4

Nut

DAS
27
9-89

Location

FP001

m133363

GA

m135058

OVER007

m137680

ST303

m137402

m137544

No

Purchased

MS21042L5

MS210421 5

Nut

DAS
27
9-89

Location

GA

m127813

OVER007

m137963

ST303

m137478

m137587

Loc Qty

12

12

200

200

497

4

493

Loc Code

709.0000

**

12

12

12

SEP 07 2017

DAS
28
9-89

SEP 07 2017

DAS
28
9-89

Page 4

Shop Packet Print

Monday, July 10, 2017 12:47:47 PM

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date: _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

Monday, July 10, 2017 12:47:47 PM

Page 5

Work Order ID: 163937

163937

Parent Item: D117-837-111

D117-837-111

Parent Item Name: BK117 Basket Mounting Provisions

Start Date: 6/27/2017

Required Date: 7/10/2017

Start Qty: 1.00

Required Qty: 1.00

MS21042L6 Purchased No

110 Each 243.0000 12 12

MS21042L6

Nut

**

Location

Loc Qty

Loc Code

ST303

243

137459

43

m137361

100

m137587

50

m137963

50

SEP 07 2017

DAS
28
9-89

DAS
27
9-89

MS21250-06022 Purchased No

110 Each 26.0000 12 12

MS21250-06022

BOLT

**

Location

Loc Qty

Loc Code

over006

15

M134762

15

ST294

11

M134955

11

SEP 07 2017

DAS
28
9-89

DAS
27
9-89

NAS1149D0416J Purchased No

110 Each 3,458.000 16 16

NAS1149D0416J

WASHER

**

Location

Loc Qty

Loc Code

GA

610

m131511

610

ST264

2848

m131511

2848

SEP 07 2017

DAS
28
9-89

DAS
27
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval 	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐								
		OTHER : ☐							

Picklist Print

Monday, July 10, 2017 12:47:47 PM

Page 6

Work Order ID: 163937

163937

Parent Item: D117-837-111

D117-837-111

Parent Item Name: BK117 Basket Mounting Provisions

Start Date: 6/27/2017

Required Date: 7/10/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0516J

Purchased

No

110

Each

421.0000

24

24

NAS1149D0516.J

Washer

**

SEP 07 2017

DAS
28
9-89

DAS
2
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST260a

200

M137736

200

ST264

221

M134943

21

M137166

200

19
3

NAS1149D0616J

Purchased

No

110

Each

72.0000

12

12

NAS1149D0616.J

WASHER

**

SEP 07 2017

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST264

72

122815

72

12

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition																					
								Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																				
OTHER : _____																									

Work Order ID 163937***163937***

Page 1

Monday, July 10, 2017 12:47:48 PM

Item ID: D117-837-111

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: BK117 Basket Mounting Provisions

Start Date: 6/27/2017 Start Qty: 1.00

1

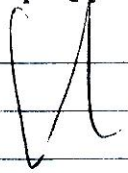
Cust Item ID:

Required Date: 7/10/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: 

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr**Revision Nbr**

DSI9724

A

IIN-D117-837

B

AUG 0 1 2017

100

Document Control

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPP D117-837-111 CHG003

**DAS
5
9-89****AUG 1 4 2017**

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging



Transport Canada Transports Canada

Department of Transport

Supplemental Type Certificate

This approval is issued to:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, Ontario
Canada K6A 1K7

Number: SH13-22

Issue No.: 2

Approval Date: June 17, 2013

Issue Date: February 10, 2016

Responsible Office:

Prairie and Northern

Aircraft/Engine Type or Model:

Eurocopter Deutschland BK117 A-1, BK117 A-3, BK117 A-4,
BK117 B-1, BK117 B-2, BK117 C-1

Canadian Type Certificate or Equivalent:

H-90

Description of Type Design Change:

Heli-Utility-Basket Installation on either the LH or RH Side of
the Helicopter

**Installation/Operating Data,
Required Equipment and Limitations:**

Installation of Heli-Utility-Basket must be in accordance with Transport Canada Civil Aviation (TCCA) approved Dart Aerospace Ltd. Installation Instructions IIN-D117-837 Revision A, dated May 30, 2013 or later TCCA approved revision.

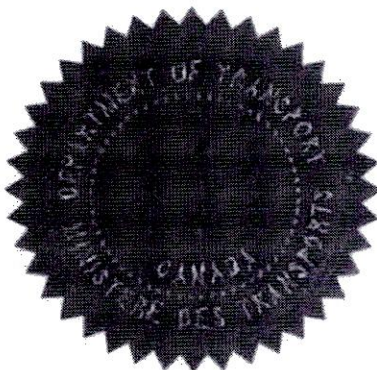
Operation of the Heli-Utility-Basket must be in accordance with TCCA approved Dart Aerospace Ltd Flight Manual Supplement FMS-D117-837 Revision A, dated June 11, 2013, or later TCCA approved revision.

Maintenance of the Heli-Utility-Basket Installation must be in accordance with TCCA accepted Dart Aerospace Ltd. Instructions for Continued Airworthiness ICA-D117-837 Revision 0, dated May 30, 2013, or later TCCA accepted revision.

Definition of the Type Design Change: TCCA approved Dart Aerospace Ltd. Master Document List MDL-D117-837 Revision J, dated February 08, 2016, or later TCCA approved revision.

Basis of Certification for affected areas: AWM 529 at amendment 529-4.

— End —



Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated **will not** adversely affect the airworthiness of the modified product.

Greg Oucharek
For Minister of Transport

Canada

5.0 PARTS LIST

Qty -011	Qty -013	Qty -111	Part Number	Description
X			D117-837-011	HELI-UTILITY-BASKET, LH/RH
	X		D117-837-013	PROP ARM KIT
1		X	D117-837-111	BASKET PROVISION MOUNTING KIT
	1*		D2332-041	PROP ASSEMBLY (OPTIONAL)
	4*		D3953-9	WASHER
1			D4784-011	BASKET ASSEMBLY, HEAVY DUTY, LH/RH
1			D4794-043	STRUT ASSY
		2	D4893-1	HARDPOINT ADAPTER, LH
		2	D4893-2	HARDPOINT ADAPTER, RH
		1	D4894-1	FWD BEAM
		1	D4894-3	AFT BEAM
		1	D4895-045	FWD OUTBOARD BEAM ASSY
		1	D4895-047	AFT OUTBOARD BEAM ASSY
1			D4911-1	BRACKET
2			D4911-3	BRACKET
4			D5106-041	BRACKET ASSY
2			AN3-11A	BOLT
4			AN4-12A	BOLT
		4	AN4-17A	BOLT
		12	AN5-23A	BOLT
		12	MS20002C6	WASHER
2			MS21042-3	NUT
4		4	MS21042L4	NUT
		12	MS21042L5	NUT
		12	MS21042L6	NUT
4			MS21069L3	ANCHOR NUT
		12	MS21250-06022	BOLT
4			MS27039-1-08	SCREW
8			NAS1097AD3-4	RIVET
	3*		NAS1149C0463R	WASHER (or AN960C416)
8		8	NAS1149D0416J	WASHER (or AN960JD416L)
		24	NAS1149D0516J	WASHER (or AN960JD516L)
		12	NAS1149D0616J	WASHER (or AN960JD616L)
6			NAS1149F0332P	WASHER (or AN960-10L)

* D2332-041 PROP ASSEMBLY & HARDWARE (OPTIONAL) TO REPLACE D3969-3 GAS SPRING

REFERENCE ONLY

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D117-837 REV. B AND
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D117-837 REV. 1

REF. TCCA STC: SH13-22
REF. FAA STC: SR03353NY

1.0 Purpose

Some customers have experienced problems with the alignment of the quick release pins after installing the D117-837-011 Basket kit after CHG 003. The purpose of this DSI is to provide instructions and parts to correct this mis-alignment. The DSI 9724-011 Shim Kit provides tapered shims that may be installed between the D5106-041 Bracket Assemblies and the bottom rib of the D4784-041 Basket Assembly.

2.0 Installing D5253-1 Shims

- 2.1 Unfasten D5106-041 Bracket Assy from D4784-041 Basket Assy.
- 2.2 Replace AN4-12A bolts with AN4-13A bolts and install D5253-1 shims as shown in Figure 1, using 2x NAS1149D0416J washers and 1 x MS21042L4 nut per shim. Pay attention to the orientation of the shim in relation with the basket center. Position the 4x D5253-1 Shims with the thicker side away from the center of the basket.
- 2.3 Fasten D5106-041 Bracket Assy to D4784-041 Basket Assy.
- 2.4 Continue with step 3.1.3 of IIN-D117-837 Rev. B.

3.0 Parts List

For D117-837-011 Heli-Utility-Baskets @ CHG 003 and later, the DSI 9724-011 Shim Kit is available from Dart. The parts in the DSI 9724-011 Shim Kit have been added to D117-837-011 Basket Kits @ CHG 006 and later.

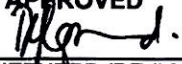
Qty -011	Part Number	Description
X	DSI 9724-011	SHIM KIT
4	D5253-1	SHIM
4	AN4-13A	BOLT
4	MS21042L4	NUT
8	NAS1149D0416J	WASHER

4.0 Weight & Balance

This DSI has a negligible effect on Weight & Balance

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: 
D. SHEPHERD (DE # 02)

DATE: 15.05.11
CERT. NO.: SH13-22
ISSUE NO.: 1

A	NEW ISSUE	RF	15.05.11
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	HS	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9724	SHEET 1 OF 2
APPROVED		TITLE	SCALE
DE APPR.		SHIM KIT	NTS
DATE	15.05.11	COPYRIGHT © 2015 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	